

CLAIMS

1 1. A wireless video communication system, comprising:
2 a transmitter for transmitting encoded video data to a wireless device;
3 a receiver for receiving a return signal from the wireless device;
4 a signal analysis system for analyzing the return signal to determine if a degraded
5 signal condition exists between the transmitter and wireless device; and
6 a recovery system that converts a predictive video frame in the encoded video
7 data into an intra-coded video frame if the degraded signal condition exists.

1 2. The wireless video communication system of claim 1, wherein the encoded video data
2 is encoded under an MPEG format, the predictive video frame comprises a P frame, and
3 the intra-coded video frame comprises an I frame.

1 3. The wireless video communication system of claim 1, wherein the wireless device
2 comprises a cellular device.

1 4. The wireless video communication system of claim 1, wherein the wireless device
2 comprises a personal digital assistant.

1 5. The wireless video communication system of claim 1, wherein the wireless device
2 comprises a video telephone.

1 6. The wireless video communication system of claim 1, wherein the degraded signal
2 condition is determined to exist if a strength of the return signal fades below a
3 predetermined threshold.

1 7. The wireless video communication system of claim 1, wherein the degraded signal
2 condition is determined to exist if the return signal includes an error message from the
3 wireless device.

1 8. The wireless video communication system of claim 1, wherein the recovery system
2 includes an MPEG decoder.

1 9. The wireless video communication system of claim 1, wherein the recovery system is
2 remotely accessible over a network.

1 10. A program product stored on a recordable medium, which when executed, provides a
2 system for recovering encoded video data being transmitted from a base station to a
3 wireless device, wherein the program product comprises:
4 a system for analyzing a return signal from the wireless device to determine if a
5 degraded signal condition exists between the base station and wireless device; and
6 a system that converts a predictive video frame in the encoded video data into an
7 intra-coded video frame if the degraded signal condition exists.

1 11. The program product of claim 10, wherein the encoded video data is encoded under
2 an MPEG format, the predictive video frame comprises a P frame, and the intra-coded
3 video frame comprises an I frame.

1 12. The program product of claim 10, wherein the degraded signal condition is
2 determined to exist if a strength of the return signal fades below a predetermined
3 threshold.

1 13. The program product of claim 10, wherein the degraded signal condition is
2 determined to exist if the return signal includes an error message from the wireless
3 device.

1 14. The program product of claim 10, wherein the system that converts includes an
2 MPEG decoder.

1 15. A method of recovering lost video data in a wireless video communication system,
2 comprising the steps of:

3 transmitting encoded video data from a base station to a wireless device;
4 receiving at the base station a return signal from the wireless device;
5 analyzing the return signal to determine if a degraded signal condition exists
6 between the base station and wireless device; and
7 converting a predictive video frame in the encoded video data into an intra-coded
8 video frame if the degraded signal condition exists.

1 16. The method of claim 15, wherein the converting step is done locally at the base
2 station.

1 17. The method of claim 15, wherein the converting step is done remotely over a
2 network.

1 18. The method of claim 15, wherein the degraded signal condition exists if a strength of
2 the return signal fades below a predetermined threshold.

1 19. The method of claim 15, wherein the degraded signal condition exists if the return
2 signal includes an error message.

1 20. A video recovery system for use when transmitting frames of encoded video from a
2 first device to a second device, the system comprising:
3 a system for determining if a degraded signal condition exists between the first
4 device and the second device; and
5 a system that transmits an intra-coded video frame in place of a video frame
6 having predictive elements if the degraded signal condition exists.

1 21. The video recovery system of claim 20, further comprising a system that converts the
2 video frame having predictive elements to the intra-coded video frame.

1 22. The video recovery system of claim 21, wherein the system that converts the video
2 frame having predictive elements to the intra-coded video frame can operate on one or
3 more individual layers.

1 23. The video recovery system of claim 20, wherein the video frame having predictive
2 elements is encoded using a partial intra refresh method.